



Aerial preview

Aerial photographs help show how traffic flow will work at JSC's new entrance. Photos on Page 3.



Blue brothers

JSC's softball umpires begin their 25th year of calling games with a clinic from Texas' top umpire. Photo on Page 4.

Space News Roundup

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No. 8

Goldin calls Clinton mandate a challenge

Says budget contains enough for 'real, meaningful space station'

NASA Administrator Dan Goldin says President Clinton has pledged to give the agency more money in 1994, including \$2.3 billion to provide for a "real, meaningful space station."

Speaking to employees in a televised address, Goldin said Clinton clearly stated his support for a strong space and aeronautics program that includes the development of a space station—one that is more streamlined and cost-efficient.

"This whole budget promises to

revitalize American industry by taking NASA to the cutting edge in technology and having the real important technology development that's relevant to American industry and the American people," Goldin said.

The President has asked NASA to look at life-cycle costs including development, operations, transportation and utilization as it develops the leaner space station, he said.

"So we have a challenge before us to look at the total picture and do the great job that NASA has always



done in broad system engineering," Goldin said. "This is our strength and while we come up with a streamlined space station, our President has challenged us to meet the key present goals for the science achievements that we are going to accomplish on a space station."

There are enough dollars to support a smooth transition, maintain continuity in the program and minimize potential job losses."

The President also has directed NASA to work closely with Congress and international partners to maintain continuity in the program and to assure their participation in producing a space station that is technically challenging and promises the highest possible returns.

"The President has also asked us

Please see **GOLDIN**, Page 4



Dan Goldin

Columbia flow back to normal

By James Hartsfield

Workers at KSC wrapped up the installation of three new liquid oxygen turbopumps in *Columbia's* three main engines last week and are on schedule for a launch of STS-55 around the second week of March.

The three turbopumps were replaced because it could not be

verified what version of retainers—an old or improved version—had been used for seals in them. After removing the original turbopumps from the engines, technicians found the improved versions of the retainers had been used. However, the changeout was necessary because in a review of paperwork associated with closing the engines out for flight, that fact couldn't be proven.

Today, standard helium leak checks of the main engine plumbing are scheduled. In addition, several Get-Away Special can experiments have been removed to install new batteries and finishing touches are being performed on other experiments aboard *Columbia* and Spacelab D-2.

This week, work on the standard launch preparations will resume. A problem was detected late last week with one of the two refrigerator-freezer-



NASA Photo

The STS-55 crew participates in the terminal countdown demonstration test at Kennedy Space Center's Launch Pad 39A. Standing from left are Mission Specialist Charlie Precourt, Pilot Tom Henricks, Payload Specialist Ulrich Walter, Commander Steve Nagel, Mission Specialist Bernard Harris. Kneeling are Payload Specialist Hans Schlegel and Payload Commander Jerry Ross.

Please see **REFRIGERATOR**, Page 4

Judge Patricia Lykos is keynote speaker

Female pioneers to share perspectives during Women's History Month at JSC

Five JSC women will share perspectives and career experiences this month during Women's History Month observations sponsored by the Federal Women's Program.

The theme of this year's observance is "Challenge Today, Seize Tomorrow."

Ivy Hooks, president and chief executive officer for Bruce G. Jackson and Associates and former longtime shuttle software manager and special assistant to the center director at JSC, will discuss "Women in Space" at 11 a.m. Wednesday in Bldg. 1, Rm. 220.

Michele Brekke and Linda Ham will speak about being the "First Women Flight Directors" at 11 a.m. March 9 in Bldg. 1, Rm. 602C.

Elsie Easley and Rhonda Moore will speak about being the "First JSC Woman Division Chief" and the "First Non-Supervisory Woman Assistant to the Director," respectively, at 11 a.m. March 15 in Bldg. 1, Rm. 602C.

Judge Patricia Lykos will be the keynote speaker at the Women's History Month luncheon at 11:30 a.m. March 26 in the Gilruth Center ballroom.



Lykos

Lykos, who has been a judge in the 180th Judicial District Court of Harris County since 1981, will present "The New Millennium: A Dark Age or a Renaissance—It's Up to You!" Prior to becoming a judge, Lykos was a county criminal court judge, a trial lawyer, criminal justice planner, detective and police officer.

Luncheon tickets are \$7.75 and may be purchased by March 22 from one of the Federal Women's Program Council members: Irene Hackler, x39043; Deborah Harm, x37222; Sandra Tetley, x36689; Jessica Kite, 283-5596; Steve Elsner, x30719; Cheryl Harrison, x34178; Carla Burnett, x48990; Natalie Saiz, x33035; Shirley Randolph, x36699; or John Lu, x33192.

For more information about the month's events, call Federal Women's Program Manager Pam Adams at x33761.

Boykin heads space station project work

Cohen adds chief engineer, creates contract review team

Jack Boykin was named space station project manager on Thursday by JSC Director Aaron Cohen as part of a broad initiative to assure the strongest possible JSC management team to lead the project through the coming redesign and restructuring.

Boykin has been acting project manager since the Feb. 12 reassignment of John Aaron from the space station project to assistant director of Engineering.

Cohen said Boykin has demonstrated the strong managerial and technical skills needed to head the project during this transition period.

"In his previous role as deputy Space Station Project manager and during his tenure to date as acting manager Jack has proven his abilities both to provide strong team leadership and to serve as a member of the overall space station program team," Cohen said.

Other actions to strengthen space station project management and oversight at JSC also were announced Thursday by Cohen, who said the moves will include an independent assessment of the JSC space station project; appointment

of a chief engineer for space station; initiatives to improve contractor efficiencies; and establishment of a work planning, performance, and reporting capability within the space station project.

Several of these actions were recommended by JSC Director of Mission Operations Gene Kranz following a review of Space Station *Freedom* management and integration commissioned by Cohen last October.

"I have asked Gene to continue his oversight activities and to serve as my principal adviser in implementing these actions," Cohen said.

"JSC's vital role in the space station program dictates that the center also play a leading role in solving recent problems with cost growth and that we begin by getting our own work package in order," Cohen said. "I am confident that if we work as a team we can solve these problems and can achieve our space station program objectives on schedule and within cost, as we have promised Congress and the American people."

In addition to formalizing Kranz's internal oversight responsibilities,

Please see **COHEN**, Page 4

New NASA badges will allow access to controlled areas

Tired of your old NASA badge? Have you run it through the washer so many times it's about to fall apart? Fear not—your new one is on the way.

All JSC civil servants and co-ops are being rebadged this spring and contractors will be rebadged this summer under a new NASA Headquarters mandate (NASA Management Instruction 1600.4A).

The new badges will include a digital photograph and a magnetic strip that can be encoded for Controlled Access Area entry.

The NMI requires that badges no longer indicate the employee's security clearance level, therefore a white background be used on all photos. The badging database will contain the employee's social security number, first name, middle name, last

Please see **NEW**, Page 4



Security Specialist Cindy King demonstrates how the new NASA badges, which include a digital photograph and magnetic strip for Controlled Access Areas, look.

JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Gift Store from 10 a.m.-2 p.m. weekdays. For more information, call x35350 or x30990.

EAA Aspects of Love (2 p.m. Feb. 28, Music Hall); \$28 each, limit four tickets. EAA Houston Livestock Show and Rodeo (Astrodome, upper level); \$9, limit four tickets. Call x35350 for dates.

Space Center Houston — Discount tickets: adult, \$7.50; child (3-11) \$4.50; commemorative: \$8.75.

Metro tickets — Passes, books and single tickets available. Movie discounts — General Cinema, \$4.50; AMC Theater, \$3.75; Loews Theater, \$4.

Entertainment '93 and Gold C coupon books, stamps, Walt Disney Club memberships, business cards, stamps and souvenirs also available.

JSC

Gilruth Center News

EAA badges — Dependents and spouses may apply for photo identification badges from 6:30-9 p.m. Monday through Friday. Dependents must be between 16 and 23 years old.

Defensive driving — Course is offered from 8 a.m.-4:30 p.m. April 17. Cost is \$19.

Weight Safety — Required course for employees wishing to use the Gilruth weight room is offered from 8-9:30 p.m. March 10 and 25. Pre-registration is required; cost is \$5.

Aerobics — High/low-impact classes meet from 5:15-6:15 p.m. Tuesdays and Thursdays. Cost is \$32 for eight weeks.

Exercise — Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24 for eight weeks.

Aikido — Martial arts class meets Tuesdays from 6:15-8 p.m. Cost is \$15 per month.

Tennis — Beginner tennis class meets 5:15-6:45 Mondays starting March 1. Advanced beginner class meets 5:15-6:45 p.m. Wednesdays starting March 3. Cost is \$32 for six weeks.

Scuba — Four-week session meets Tuesdays and Thursdays beginning March 25 at the Gilruth Center. Total cost is \$190, with \$50 paid at registration.

Country and western dance — Beginner class meets from 7-8:30 p.m. Mondays, beginning March 1. Intermediate classes meet from 8:30-10 p.m. Mondays. Six-week course costs \$20 per couple.

Ballroom dance — Beginner, beginner-intermediate, intermediate and advanced classes will meet Thursdays for eight weeks beginning March 4. Cost is \$60 per couple.

Fiction workshop — Five-week creative writing class meets Wednesdays beginning March 31. Cost is \$80.

Fitness program — Health Related Fitness Program includes medical examination screening, 12-week individually prescribed exercise program. Call Larry Weir, x30301.

JSC

Swap Shop

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be run only once. Send ads to Roundup Swap Shop, Code AP3, or deliver them to the deposit box outside Rm. 147 in Bldg. 2. No phone or fax ads accepted.

Property

Rent: Arkansas cottage, furn, wooded, 4 acres, screened porch, antiques, \$250/wk, \$50/day. x33005 or 538-4141.

Sale: San Leon, 2 lots, 2 rent houses, overlooks water, \$85K. 339-1152.

Rent: Univ Trace condo, 1 BR, study, W/D, DW, ceiling fans, cable hookup, exercise room, \$485/mo. 488-2946.

Sale: Meadowbend, 4-2-5-2, 2500 sq ft, 2-story, FPL, lg backyard, deluxe carpet. Gil, 282-3314 or 334-6901.

Sale: LC, 3-1.5-1, corner lot, boat storage, fruit trees, ceramic tile, owner will help w/closing costs, \$57.9K. 554-6234.

Sale: Shoreacres, 4-2-2, pool, extra wooded lot, trees, new carpet/flooring, \$89K. 333-7615 or 470-2592.

Sale: Sycamore Valley, 3-2-2, new carpet/vinyl, lg kitchen, den, LR, 1800 sq ft, \$76.9K. Ann Marie, 333-1700 or 481-5465.

Sale: Pipers Meadow, 4-3-2, 2-story, corner lot, vinyl siding, gameroom w/pool tbl, 2500 sq ft, \$105K. 480-0125.

Sale: Dickinson, 3-1, frame house, 1/2 acre, \$40K. 337-5018.

Sale: South Shore Harbour, 3-2-2, lg island kitchen, breakfast rm, living/dining, deck w/ceiling fan, marble jacuzzi tub, trees, \$113.9K. Bob, x33057 or 538-3431.

Lease: Webster condo, 2-1, new paint/carpet, FPL, all appl, patio, avail 3-1, \$495/mo. x31275 or 486-0315.

Sale: El Dorado Trace condo, 1-1.5-1 cp, all appl, patio, balcony, FPL, designer carpets/wallpaper, low equity assum or FHA approved. Barbara, 488-3383.

Lease: Oakbrook, 4-2-5-2, both formals, family room w/FPL, fenced, no pets, \$985/mo. 488-5210.

Rent: Galv condo, furn, sleeps 6, Seawall & 61st St, wknd/wkly/daily. Magdi Yassa, 333-4760 or 486-0788.

Rent: Pearlant, 3-2-2, avail 4-1, \$700/mo., \$500 dep. 480-9036.

Sale: Heritage Park, 3-2-2, new roof/carpet, lg living area, WBFP, deck, fans, blinds, \$78.9K. x32886 or 482-8373.

Lease: LC, 4-2-2, formals, FPL, lg fenced yard, no pets, avail 4-15. x31440 or 333-5693.

Rent: Univ Place TH, 2-story, 3-2.5-2, gar opener, gar heat, FPL, corner lot, fenced, \$725/mo. Dennis, 282-5273 or 480-5361.

Sale: Nassau Bay TH, 3-2.5-2, 1800 sq ft, completely remodeled, \$97.5K. 333-3876.

Sale: CL Shores, 3-2-3, trees, boatslip, \$122.5K. 538-1849.

Cars & Trucks

'90 GEO Metro, 4 DR, AM/FM, 5 spd, \$3.6K OBO. Mandy, 283-5779 or 480-1236.

'80 Volvo Stationwagon, body good cond, doesn't run, \$400 OBO. Heidi, 335-1668.

'85 Honda Accord hatchback, auto, 86K mi, new tires, ex stereo, ex eng, need body work, \$2.5K OBO. Beth, x33078.

'91 T-Bird Super Coupe, wht, leather, all pwr,

ARS, JBL sound, warr, roof, 9K mi, \$18K OBO. 286-3981.

'76 Datsun 280Z 2+2, bronze/brwn, 66k mi., \$2.1K. Everett, x36224 or 488-6024.

'84 300Z 2+2, auto, AC, PW, all disk brakes, consider partial trade, \$3.8K. 488-7771.

'79 Plymouth Volari w/Duster pkg, red, 2 DR, auto, radio, no air, 79K mi, \$400. Chris, 282-4271 or 996-9646.

'84 Porsche 944, runs good, cd stereo, \$4.2K. Gil, 282-3314 or 334-6901.

'82 Mercury LN7, runs well, rebuilt eng, 38K mi, \$1.2K OBO. 326-3272.

'78 Porsche 928, brwn w/leather int, auto, ex cond, 75K mi, \$8.5K. Bill, x48889.

'91 GMC Sierra SLE, extended cab, loaded, ex cond, one owner, 25K mi, \$15K OBO. Scott, 333-7637 or 538-2067.

'63 Olds Super 88, antique, 4 DR, hardtop, AC, one owner, orig '63 Texas title, \$3.8K or trade for '86 full sz Sedan. 335-1480.

'79 Pontiac Bonneville, new inspection, license, good cond, \$1K. x34552 or 481-1808.

'90 Porsche 911, Carrera 2, red/tan, 5 spd, builtin front/rear radar, 15K mi, one owner, ex cond, \$50K. x38723 or 334-1455.

'84 Pontiac LE6000, wht, new tires, AC needs work, \$1.9K. x36604 or 482-7156.

'78 T-Bird, PS/PB, cruise, AM/FM/cass, AC, ex cond, \$700. Steve, 283-9398 or 338-0037.

'79 Dodge Aires K LE, 4 dr, 14K mi, wht, \$4K. Doug Fox, 996-6077.

'79 Olds, AC, runs, needs tires, tuneup, \$850 OBO. Bob G., 488-0966.

'73 Maverick Classic, new paint, like new tires, 302 V8 2V, auto, air, PS, less than 40K mi on new eng, \$1.8K. Pete, 334-2963.

'80 Fiat Spider Classic, 2.0l eng, 4 cyl, FI, 2 tops, extras, \$2.7K OBO; GMC PU, 8 cyl, 2 DR, PW/PDL, ex cond, \$2.3K OBO. Ed, 282-4091 or 996-1106.

'84 GMC S15 PU, longbed, P/U, AC, PS/PB, \$3.1K OBO. David, 244-0092.

'90 Toyota Supra Turbo, maroon/gray, CD, Targa top, 19K mi, ex cond, \$19.5K. Caroline, 554-7761.

'88 Mazda 929, full pwr, moon roof, maroon/leather, 86K mi, new tires/brakes, \$7.8K; '83 Volvo 760, 4 DR, turbo-diesel, LTHR, equipped, \$3.2K; '80 Volvo 240 SW, diesel, broken eng, \$200; '79 VW Rabbit, diesel, runs, \$500. 332-2484 x58 or 534-3372.

'84 Toyota Tercel, auto, AC, 67K mi, ex cond, \$1.9K. x38518 or 332-4366.

'72 Triumph Spitfire, new top, Pirelli P3 tires, not running, \$550. x37667 or 326-2864.

'83 Buick Century, 3.0i V6, 83K mi, all maint records, sunroof, auto, 4 DR, new 800 carb, 4 tires, no rust, needs eng rebuilt, \$295. Jerry, x38922 or 488-5307.

'86 Nissan Stanza wagon, tuned up, storage space, good cond, \$3K. 996-5191.

Boats & Planes

'76 18' Nordic jet boat, 460 Ford, Berkeley pump, Tandem trlr, ski access, ex cond, \$3K OBO. Linda, 480-1866 or 409-925-4862.

'82 20' Bayliner 2070, 120 hp I/O, 10 hp Honda, full cabin, Furuno, Sportsman trlr, \$6.5K OBO. 286-3981.

26" 10 spd bike, pump, bag, ex cond, \$100. Mary Lou, x34306 or 480-2206.

'90 16' Kenner fishing boat, center console, 88 hp Johnson motor, fuel tank, all carpet, low hours, \$7.2K. 470-2592.

18' Sailable canoe w/sail, flexible ARS shell, mountable on top of car, \$500. Minh, x30992 or 484-2456.

JSC

Dates & Data

Today

Cafeteria menu — Special: meatballs and spaghetti. Entrees: wieners and beans, round steak with hash browns. Soup: chicken noodle. Vegetables: okra and tomatoes, carrots, whipped potatoes.

Tuesday

Cafeteria menu — Special: fried chicken. Entrees: beef stew, shrimp Creole, sweet and sour pork chop with fried rice. Soup: beef and barley. Vegetables: stewed tomatoes, mixed vegetables, broccoli.

Wednesday

Astronomy seminar — The JSC Astronomy Seminar will meet at noon March 3 in Bldg. 31, Rm. 129. Sir Fred Hoyle will discuss "The Next 100 Years in Astronomy" on videotape. For more information, call Al Jackson at 333-7679.

Toastmasters meet — The Spaceland Toastmasters Club will meet at 7:15 a.m. March 3 at the House of Prayer Lutheran Church. For more information, call Jim Morrison at 480-9793.

Cafeteria menu — Special: Swiss steak. Entrees: fried perch, New England dinner. Soup: seafood gumbo. Vegetables: Italian green beans, cabbage, carrots.

Thursday

Credit Union meets — The JSC Federal Credit Union Annual Meeting will be at 7 p.m. March 4 in the Credit Union lobby. Members may vote for directors from 9 a.m.-5:30 p.m. March 4, or prior to the meeting from 6:30-7 p.m. For more information, call Peter Cerna at

x30768.

Cafeteria menu — Special: stuffed bell pepper. Entrees: turkey and dressing, enchiladas with chili, wieners and baked beans. Soup: cream of chicken. Vegetables: zucchini squash, English peas, rice.

Friday

NAL meets — The NASA Alumni League will host a social and new members night, with a buffet and dancing, at 5:30 p.m. March 5 at the Gilruth Center. Cost is \$5 for members, \$10 for nonmembers. For more information, call Peggy Towns at 280-7312.

Cafeteria menu — Special: Salisbury steak. Entrees: baked scrod, broiled chicken with peach half. Soup: seafood gumbo. Vegetables: cauliflower au gratin, mixed vegetables, buttered cabbage, whipped potatoes.

March 8

Cafeteria menu — Special: beef and macaroni. Entrees: ham steak, Parmesan steak. Soup: chicken and rice. Vegetables: green beans, carrots, au gratin potatoes.

March 10

Freedom Fighters meet — The Space Station Freedom Fighters will meet at noon and 5 p.m. March 10 in Rm. 160 of the McDonnell Douglas Tower, Space Center Blvd. and Bay Area Blvd. For more information, call David Cochran at 482-7005.

Astronomy seminar — The JSC Astronomy Seminar will feature an open discussion meeting at noon March 10 in Bldg. 31, Rm. 129. For more information, call Al Jackson at

333-7679.

Lunch and learn — The American Institute of Aeronautics and Astronautics' Fluid Dynamics Technical Committee will meet at 11:45 a.m. March 10 in Gilruth Center Rm. 207. Dr. Rakesh Bhargava will discuss "An Experimental Investigation on the Combined Effects of Initial Roughness and Free Stream Turbulence on the Turbulent Boundary Layer Development." For more information, call Bhargava at 983-9371.

March 11

Lunch and learn — The American Institute of Aeronautics and Astronautics' Computer and Software Systems Technical Committee will meet at 11 a.m. March 11 in Lockheed Plaza 3. A panel discussion will look at perspectives in software testing. For more information, call Cora Carmody at 282-6580, or Tek Shrini at 282-6643.

SSQ meets — The Society for Software Quality will meet at 5:30 p.m. March 11 at the Days Inn on NASA Road 1. Penny Muncaster-Jewell of GHG Corp. will ask "Does an Object Oriented Approach Always Equate to Quality Software?" For more information, call Felix Balderas at x31945.

March 15

Astronomy seminar — The JSC Astronomy Seminar will meet at noon March 17 in Bldg. 31, Rm. 129. Jim Oberg will discuss "Fast Terra-Forming of Mars." For more information, call Al Jackson at 333-7679.

bass drum, hi hat, 1 ride cymbal, 2 crash cymbals, \$750. Richard, 333-7455.

6 pc Roland DD30 elec drum set, MIDI controller, 4 toms, 1 snare, 1 bass drum, rack mount stand, patch cables, spare heads, drum cases, ex cond, \$850. Marc, x37322 or 992-5352.

Household

French Provential sofa, Fruitwood, beige upholstery, good cond. 941-3262.

Bentwood dinette set, 40" round tbl, 4 cane seat chairs, dk wood, ex cond; elec typewriter. 282-4849 or 409-925-7839.

GE Spacemaker stacked W/D, ex cond, \$480. Robert, x34397 or 480-3358.

Pecan lamp tbl w/glass top, \$30; wicker hanging chair, \$15; button-tufted sofa, loveseat, light blue w/whin criss-cross wht stripe, \$125; button-tufted chair, blue, \$40. 488-6724.

Wards heavy duty W/D, full warr til 7-8-93, was \$850, now \$450. Kitty, x30572.

Ladies oak dressing tbl w/ornate oak framed mirror/matching stool, \$175. Pat, x32661.

Brwn corduroy loveseat, oak accents dn front of arms, \$100. 286-3515.

Tappan undercounter dishwasher, 8 yrs old, \$40 OBO. Ben, x30755 or 486-2633.

Sofa, chair w/tottoman, earth tones, \$150. x31913 or 486-9488.

RCA 20" color tv w/remote, 1 yr old, \$125 OBO. 480-2638.

Contemp loveseat, blue/pastels, \$150 OBO; full sz bed w/frame, anti-allergy casings, cream eyelet bed linens, \$200 OBO; oak rocker, \$50 OBO; boom box, cass broken, \$20 OBO; oak nitestand, \$50 OBO, brass desk lamp, \$15. x35869 or 480-3017.

Ethan Allen maple dining rm set, incl oval tbl w/2 leafs, 6 chairs, \$750; 12 ft windsurfing raceboard bag, \$50. x33888.

Entertainment center, whitewashed oak, ex cond, \$450. 480-9425.

Kg sz waterbed w/solid oak hdbd/fibd, waveless matt, liner, ultratherm heater, \$300. 488-8931.

Couch, floral print, 5 mos old, was \$800, now \$450; green/tan wicker twin bed hdbd, nails, matt, \$175. Connie, 532-3141.

Wanted

Want woman who purchased my rattan furn to call me, you still have to pick up a coffee tbl and chair. 992-5832.

Want students to join a Russian language class taught by a Rice Univ prof, students should be at intermediate level w/ at least 2 yrs exp. Rick, x36042 or Keith, x38024.

Want good quality weight bench w/leglift, curl, weights, 280-8608.

Want back issues of Popular Science magazine, pre 1992 for college engineering student. 334-3066.

Want roommate to live in 4-2 house in Friendswood, nonsmoker, cable, W/D, microwave, VCR, gas grill, all privileges, \$250 mo, all bills paid. Michael, x38169 or 482-8496.

Want wht or ity wood baby crib in ex cond, any brand except Jenni Linn. Geraldine, 282-2556 or 992-4054.

Want wheelchair in good cond. Dana, x30747 or 332-7074.

Want weight lifting equip, weights. 474-4742.

Want small tractor, Ford 8N or similar. Ken, x30921 or 554-6504.

Miscellaneous

Nissan hubcabs, 4 motorcycle helmets, best

offer; 19" color tv, \$20; leather motorcycle racing jacket, best offer; 20 gal fish tank w/stand, \$50. x35107 or 474-4742.

Encyclopedia set, 13 vol, \$60; food dehydrator, \$45; stepper exerc, \$55; ski machine exerc, \$60; men's leather jacket, \$125; flight jacket, \$45; mink coat, \$725; fox fur, \$95. 488-2946.

Running baby stroller, spoke wheels, water bottle, ex cond, \$125; Mende 8" Newtonian telescope, \$650 OBO; GE tabletop new band sw radio, \$75. Mary Lou, x34306 or 480-2206.

G. Harvey signed artist proof "Independent Oilman," framed, \$675 OBO. x31426.

Craftsman 10" radial arm saw, bench type on casters, \$250. George, 338-2209.

Leather briefcase, new, cost over \$100, now \$50. 486-8266.

Chest set, carved from sandelwood, lg chessboard/pieces, \$300. 933-9722.

FPE LX108-16 int elec service box, \$25 OBO. Boykin, x37341 or 326-1267.

2 NW airline roundtrip tickets to anywhere in US, use by 4-26, \$325/ea OBO. 992-1466.

Flight suit, high alt MC-4 partial pressure/anti-g suit w/gloves, ext tubes, hoses, fittings, USAF green nylon, sz sm, \$450. 538-3444.

Wedding gown, open neck, short puffy sleeves, sz 4-6, \$300. x33683 or 334-6808.

Ladies ski boots, sz 8, Salomon SX-81, \$120. x35753 or 337-2002.

Gympac 2500 fitness sys, bench/wall unit for weight training, needs assembly, was \$230, now \$100 OBO. 244-8985.

Two 5 gal Jerry gas cans w/spare tire carrier mount, make offer. Phil, x38805 or 488-4453.

Pair of cushioned, gold uphol chairs, ex cond, \$85/both, tv tbl, \$10; mink stole, 3/4 length, was \$3.5K, now \$950; child's tbl, 2 chairs, \$60. 488-5564.

Golf balls, 700 + from ex to range, all brands, all colors, 80% ex to good, \$70. Steve, 283-9398 or 338-0037.

HK-91 rifle, extras, \$1.2K. Steve, 244-9625.

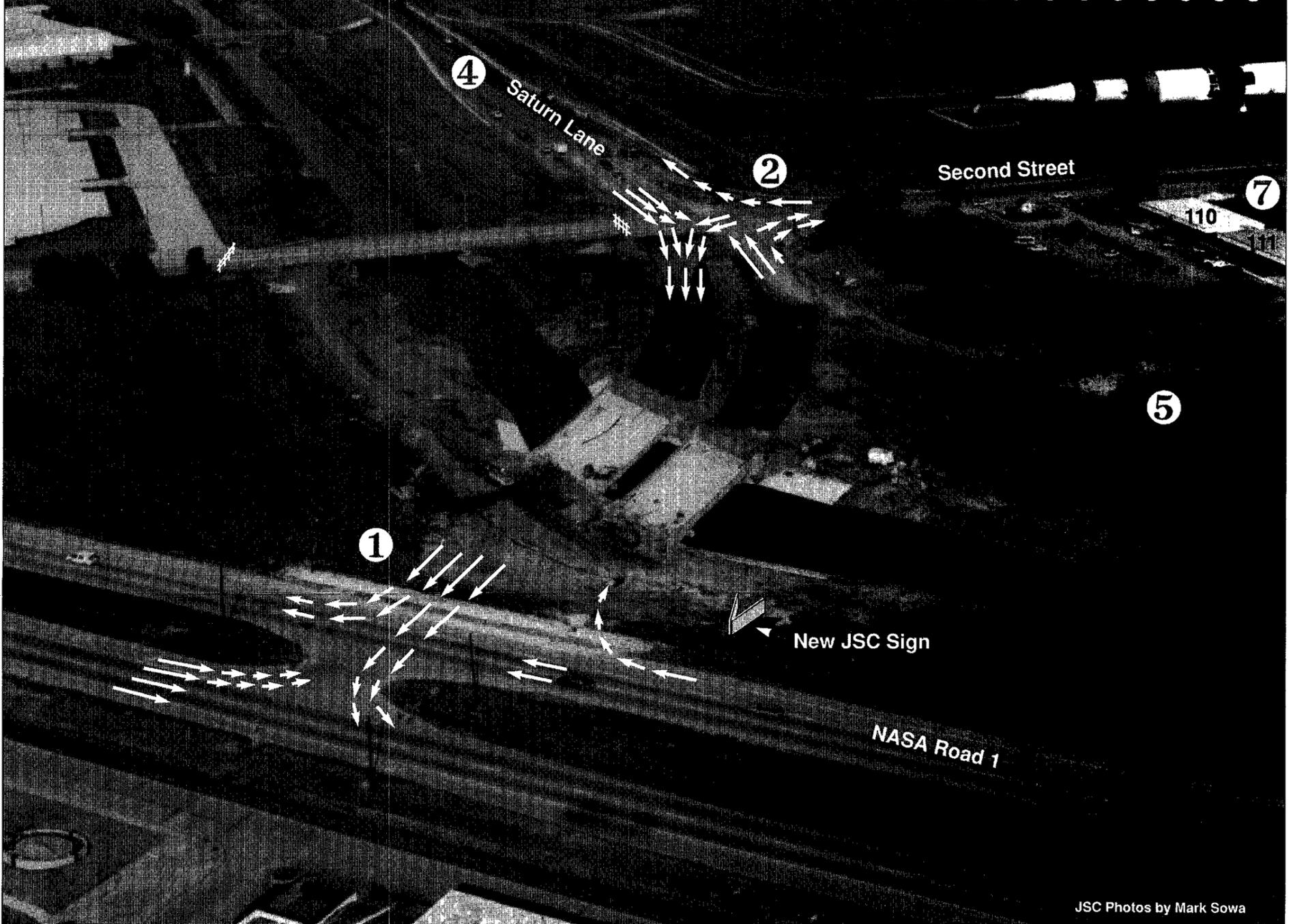
Delux car cover for Mazda RX7, was \$120, now \$75. Vicki, x48640 or 332-9720.

Space shot cards, buy, sell, trade, series 1, 2, and 3. x34208 or 488-7144.

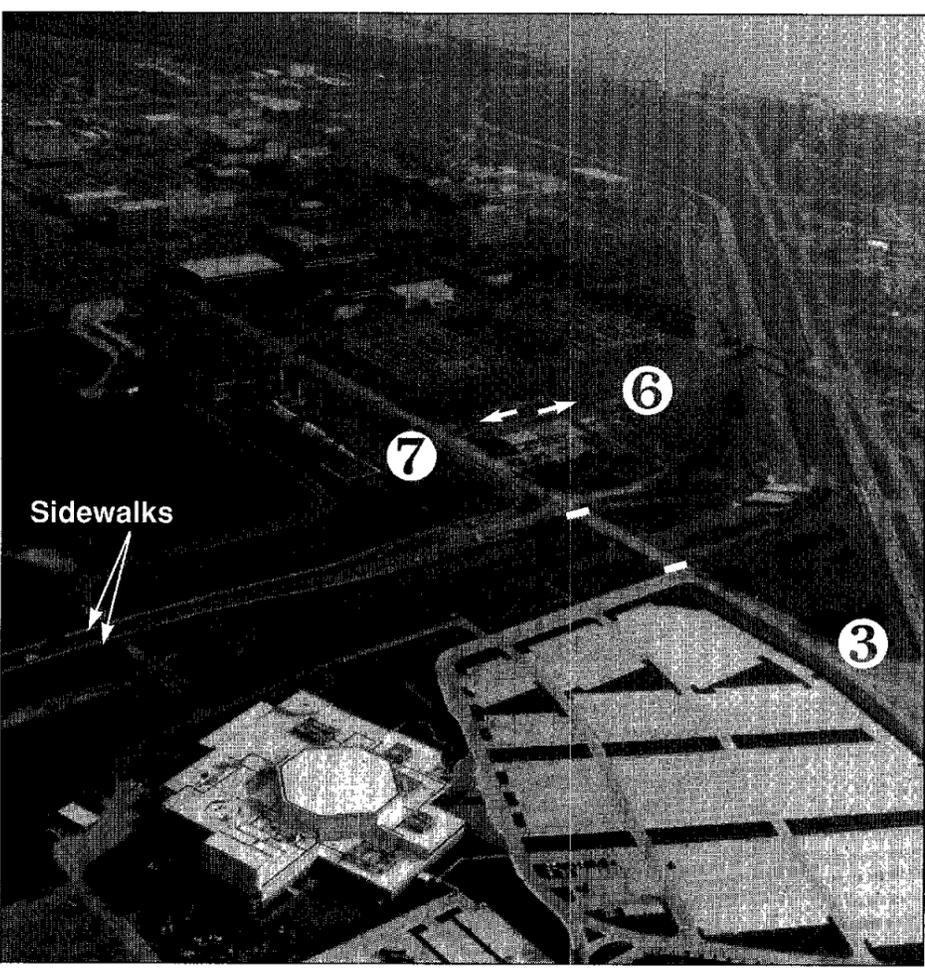
Beaded satin wedding dress, Designer, lissa, sz 7, cathedral length train, V neck, puffy long sleeves, petticoat. Shirley, x30227 or 482-0888.

Sneak overview

With Saturn Lane improvements having reached 80 percent completion, JSC workers are finally beginning to see the light at the end of the road construction tunnel. Completion is now scheduled for May 1, the result of about six weeks worth of rain delays that have slowed the Metro construction project. Hubco Inc. is the prime contractor for the \$3.8 million project.



JSC Photos by Mark Sowa



1 Saturn Lane at NASA Road 1

JSC's new main entrance will be directly across from Nassau Bay City Hall on Saturn Lane, which will curve from NASA Road 1 to a three-way intersection with Second Street. Eastbound traffic from NASA Road 1 will be able to turn onto Saturn by way of two left-turn lanes. Westbound NASA Road 1 traffic will be able to access Saturn by way of one right-turn lane. Traffic exiting the center will use Saturn's two left-turn lanes or two right-turn lanes. An electronic signal will control traffic at the intersection.

2 Saturn Lane at Second Street

Saturn will intersect Second where it always has, but with four lanes it will have multiple turn lanes. Eastbound traffic coming from the direction of Bay Area Blvd. will have two left-turn lanes to enter the center and two through lanes that continue on toward the new intersection at NASA Road 1, widening to three lanes after it passes Second. Westbound traffic coming from NASA Road 1 will enter the center by way of two right-turn lanes at Second, or continue on toward Bay Area Blvd. on two through lanes. Traffic leaving the center on Second will have the option of using one right-turn lane to exit on Saturn toward Bay Area Blvd., or two left-turn lanes to exit on Saturn toward NASA Road 1.

3 Second Street at NASA Road 1

JSC's old main entrance on Second becomes the main entrance for Space Center Houston, but will be blocked to JSC traffic. Large planter barricades will block traffic both ways—coming from NASA

Road 1 or from JSC—before it can cross the Houston Lighting and Power drainage canal.

4 Saturn Lane

Saturn will receive an asphalt overlay from Bay Area Blvd. to NASA Road 1 when the project is completed. Hike and bike trails will border the new four-lane Saturn from the old Credit Union gate to NASA Road 1, and eventually will be extended along NASA Road 1 when that widening project begins.

5 Old Avenue E

The segment of Avenue E that used to run between JSC Gate 2 and Saturn has been demolished and removed.

6 New Avenue E

The new segment of Avenue E will soon run from Gate 2 to Second, curving so that it passes behind Bldgs. 110 and 111 inside the center's security perimeter. There will be no change to the intersections on the roads that connect Avenue E and NASA Road 1 at Gate 2.

7 New Avenue E at Second Street

A new electronic signal will control traffic at the new three-way Avenue E and Second intersection. For vehicles heading toward Second on Avenue E, there will be one right-turn lane and one left-turn lane. Northbound traffic on Second will be able to turn right on Avenue E by way of one right-turn lane, or continue on Second by way of two through lanes. Southbound traffic on Second will be able to turn left on Avenue E or continue to Saturn by way of two through lanes.



Ames study may help reduce lightheadedness after space flight

A study at Ames Research Center may lead to improved ways of keeping astronauts from feeling lightheaded when they first stand up after returning to Earth from space.

Dr. Joan Vernikos, the study's principal investigator, said a reduced level of plasma is believed to contribute to this tendency to feel lightheaded when standing, a condition known as orthostatic intolerance.

"The primary purpose of this study is to compare the effectiveness of two procedures that expand plasma vol-

ume," said Vernikos, chief of Ames' Life Science Division. "We long have known that expanded plasma volume may be a key to preventing fainting in people following head-down bed rest and potentially in astronauts."

Bed rest in a slightly head-down position simulates many of the physiological effects of weightlessness.

Vernikos said that without the pull of gravity, astronauts experience an upward shift of body fluids. The body responds to what it perceives as excess fluid and reduces the circulat-

ing fluid volume by excreting more urine. Upon return to normal gravity, fluids again shift to the lower extremities, increasing the chance an astronaut will feel lightheaded.

By finding reliable and acceptable means of increasing the plasma volume in volunteers, she believes much light-headedness can be prevented.

Shuttle crews routinely take water and salt tablets just before re-entry. Vernikos said this is believed to expand plasma volume in astronauts in space, but hasn't been measured.

"We also have had promising results with a synthetic steroid similar to steroids normally found in the body," Vernikos said.

This steroid, which enhances the salt tablets and water, may provide a more reliable alternative, particularly as mission lengths increase. It is used clinically to treat people who faint or experience sudden bouts of low blood pressure when they stand.

Her volunteer study involves six women and six men ages 30 to 50. Plasma volume is measured in each

person under three conditions: after taking water and salt tablets, after taking the steroid or after no medication.

Two hours after each treatment, the volunteer lies quietly for 30 minutes. A blood sample is drawn and a dye is injected into the volunteer, followed by second blood sample to measure plasma volume. The volunteer then stands for 15 minutes and additional blood samples are drawn five and 15 minutes later. Blood samples will be used to measure the hormones that regulate sodium and fluids.

NCMA hosts educational conference

Contract finance will be the focus of a special seminar hosted by the Space City Houston Chapter of the National Contracts Management Association on March 16 at the University of Houston—Clear Lake.

"Financial Issues for the Contracts Professional" will be presented by Jim Balinskas, a procurement analyst in the Contracts Pricing and Finance Division at NASA Headquarters, and Cory Ridner, division contracts manager at Hughes Aircraft Company.

Seating is limited and reservations must be made no later than Friday.

For more information, civil servants should contact Jeff Cullen at 483-1880. Others should call Sherri Wagner at 283-4660.

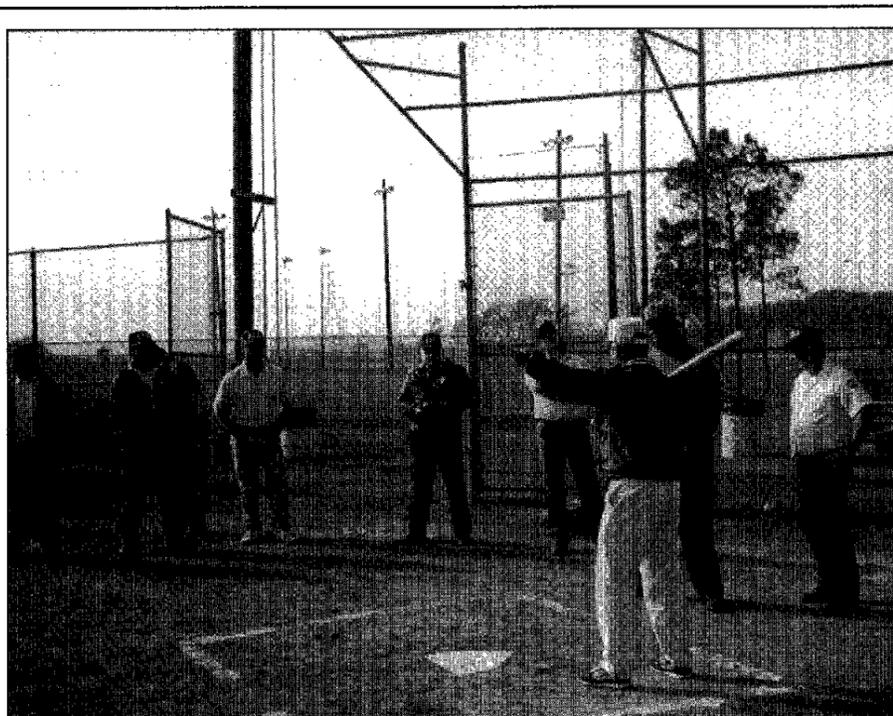


Photo by Rich Holtje

BROTHERS IN BLUE—Texas State Umpire in Chief George Studdard gives NASA/JSC umpires pointers on new rules, field mechanics and field positioning during a clinic last weekend at the Gilruth Center. JSC has a pool of 35 umpires—often called "blue" on the field—that is certified by the Amateur Softball Association after rigorous training and testing. All of JSC's umpires have regular jobs as civil service or contractor employees. This will be the 25th year that the NASA/JSC Umpires Association has been calling games here. Morris Williams is president of the JSC association.

Correction

A story on Page 3 of the Feb. 22 issue of Space News Roundup incorrectly identified one of JSC's major organizations as the Information Services Directorate. The correct name for the organization is the Information Systems Directorate.

Goldin says agency to inspire hope

(Continued from Page 1)

to work closely with our international partners to assure that we have a design that is both technically challenging and promises high returns," he added. "By performing in this manner we will be able to free up billions of dollars for development for very, very critical new technologies which will contribute to the United States economy and our country's technology base and have NASA once again a world leader in technology and science and aeronautics. It provides very significant dollars that are aimed at new projects that could lower the cost of research, achieve results faster and be much more beneficial to the economy. And it provides important future enhancements to a broad

range of ongoing activities, including aeronautics, human and robotic space flight, technology development and a broad, broad range of technologies ranging from micromechanical devices all the way to artificial intelligence and expert systems."

Goldin congratulated Clinton on his "courageous vision" of an aeronautics and space program that is relevant to America and that will continue to lead the world in innovation and discovery.

"Were going to touch everyone with inspiration and innovation and hope. We're going to understand our environment better and we're going to reach out and understand the basic laws of physics better. I have great faith and pride in the working women and men of NASA who I

know will step up the challenge and do more with less. NASA will serve the President's vision and live up to its reputation as a can-do agency by becoming a model in government for quality, efficiency and productivity."

NASA's new technology investment package will provide significant funding aimed at new projects that could lower the cost of space research, achieve demonstrable results sooner and are more directly beneficial to the economy, he said. The new plan allows room in NASA's budget for future enhancements to ongoing agency efforts in aeronautics, human and robotic space flight and the transfer of technology to new and existing industries.

New NASA badges are on their way

(Continued from Page 1)

name, date of birth and a digital photograph. A new form—JSC Form 473A—was created to collect the information. Most employees already have turned in these forms and the data has been entered into the new Video Imaging Badging System.

The new VIBS allows all employee information to be stored on a password protected system, eliminating the need for the filing and storage of paper forms containing the same data. The new badges produced by the VIBS will serve a

dual purpose. A magnetic strip on the back will contain CAA codes, and a bar code on the back can be used in the future for inventory control and property transfer.

Each organization's employees will be assigned a rebadging location, either Bldg. 30 or Bldg. 110, and your administrative assistant can tell you which building to go to and when. They'll also have some helpful hints to make the process as pleasant as possible. If you haven't been contacted by your administrative assistant for a rebadging

appointment, please contact them to sign up. Make-up appointments will be made available at the end of the initial badging cycle.

NASA Security reminds all employees that attaching pins or stickers to badges is strictly prohibited because breaking the lamination causes the badge to deteriorate quickly and any damage to the magnetic strip renders it useless.

If you have any questions about the new badging system or the rebadging schedule, call Joe Olivarez at x34022 or Cindy King at x33251.

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Refrigerator-freezer trouble being checked

(Continued from Page 1)

ers installed in *Columbia's* middeck for science sample storage during the flight. One of the units would not cool when turned to the freeze mode.

Technicians were to remove and check it last weekend. A spare refrigerator-freezer unit is on hand at KSC and could be installed without an impact to launch. Two such units are required to be in good operating condition for launch due to science requirements of the mission.

Cohen appoints Walker, Cooke to space station project team

(Continued from Page 1)

Cohen appointed veteran Astronaut Dave Walker to head a review team of JSC engineers at McDonnell Douglas' Huntington Beach, Calif., plant where development and construction of JSC-managed space station elements are under way.

Doug Cooke, who currently manages JSC's Exploration Programs Office, has been reassigned to the

new position of chief engineer for space station. Cohen said Cooke's assignment to the staff of the director of Engineering will help focus vital engineering support to space station and assure the project receives the highest possible priority.

Cohen said a search is under way for a distinguished figure in the space community to contribute to the on-going operational assess-

ment of space station management systems utilized by the center and its space station contractors.

"We are looking for a highly qualified figure to assist us and to recommend steps for improving the project's management and oversight of both prime and subcontractors. I expect to select such an individual in the near future," Cohen said.

Boykin came to JSC in 1965 and

has held numerous positions of increasing responsibility.

From 1975-79, he was shuttle events control subsystem manager. In 1979, he became principal function manager for redundancy management in the Systems Analysis Branch. In 1983, he was shuttle ascent hardware and software coordinator in the Orbiter Avionics System Office, and later became

assistant manager and deputy manager in that office.

In 1986, Boykin became manager of the NSTS Avionics Office. In 1989, he was appointed deputy manager of NSTS engineering integration and in 1990 he became deputy manager of the Orbiter and GFE Projects Office. He had been deputy manager of the Space Station Projects Office since August 1992..